



Ø BEAT

NOVEMBER 1985



COLORADO SPRINGS,
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Frank Drake - KL7IPV
4964 Harvest Rd.,
Colorado Springs, CO. 80917

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Ø BEAT



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ZERO BEAT is published monthly in the interest of the members of the Pikes Peak Radio Amateur Association Inc., P.O. Box 16521, Colorado Springs, Colorado 80935. Cost is 50¢ per month for non-members or a \$4.00 per year subscription. Permission is given to reprint articles or excerpts provided credit is given. Deadline for submission of articles is the 21st of the month. Classifieds accepted anytime.

The Pikes Peak Radio Amateur Association meets on the second Wednesday of each month at Giuseppe's Depot Restaurant at 10 S. Sierra Madre at 7:30 p.m. All amateurs and interested parties are invited to attend.

Editor: Frank Drake KL7IPV, 4964 Harvest Rd. Colorado Springs, CO 80917 597-2406

COMPUTER CORNER

FROM THE DESK OF YE OLDE EDITOR

FROM THE DESK OF YE OLDE EDITOR

This month I have pilfered a lot of material from newsletter of the Anchorage Amateur Radio Club. The editor of that newsletter has been suffering the slings and arrows of the job about as long as I have. I get about five different area newsletters each month. It is interesting to see how much alike each club is. The problems we have here are the same as in each of the other areas. Even down to the typos the editors make, and then leave in, to see who really reads these things. It has been fun for me to do this for the last year or so. I really wish that others would take an interest in this newsletter and send in tidbits and news items for the enjoyment of all of us. But, my supplications to you are not foreign to the other editors either. They are constantly asking for member's contributions, also. It seems that we are more alike than just when it comes to radio! I could use some fresh ideas to improve OUR newsletter. What would you put in here if YOU were the editor? Would you change something? Add something? Take out something? Is anyone out there?? Can I only assume that I'm doing doing so well that nothing can be, or needs to be, changed. Gee, it's a real GREAT feeling knowing that my literary works cannot be improved. Come on, I do believe that and I know none of you do either! Also my thanks to the Toronto Pet Users Group for the program in this months issue.

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 For Sale: KAYPRO II \$895. This is a self contained, portable computer. It has a 64K RAM, 9" green CRT, two 5.25 disc drives and bundled software that includes CPM, Wordstar, MBASIC, QBASIC, CBASIC, SBASIC, many games, and programs that aren't normally supplied with other computers. See Frank or call at 597-2406 (No, it is not the one I do the newsletter with!!)

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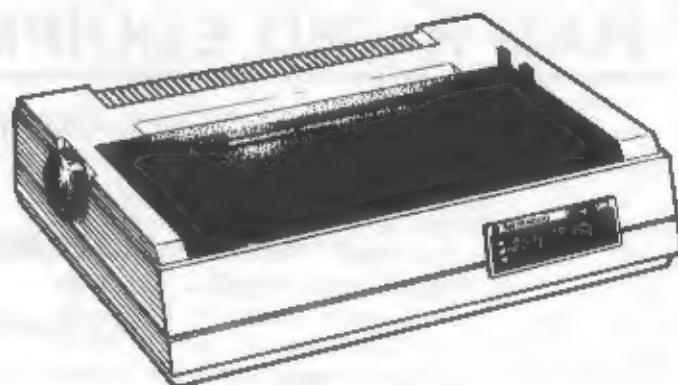
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1985 Handbooks now 15% off!

BRING YOUR EQUIPMENT TO TRADE — LET'S TALK!



SECRETARIES CORNER

ARD MEETING MINUTES BOARD MEETING MINU

The board meeting was called to order by Les, KC0NC on 10-14-85 at 7:30 PM. Those present were: Oak, K8RDL; Frank, KL7IPV; Ken, WA6TTY; Mike, K8TER; Bud, N0DDF; Al, N0CMW; Don, WD0HNS; and Myron, AH6AP.

Les appointed Frank, KL7IPV, to take over as the committee chairman for the Education Committee. The bill for the ARRL club insurance for \$98 was submitted. Coverage was reduced to \$500,000 instead of the million as they could not get anyone to underwrite it. The board will look into getting the additional coverage for special events. The library had sent a form verifying PPRAA status. The secretary was instructed to return the form as is. It showed Al, N0CMW, as the person to contact for the club. The subject of club property was brought up. After some discussion, it was moved by

Frank that property be turned into the club custodian and no longer be allowed to be used personally. Second by Don. The motion passed unanimously. A motion was made by Oak and seconded by Frank that all club property previously declared as surplus and not sold be sold at the next swapfest. Passed unanimously. Oak will follow up on the club facilities at the D & B School. A brief discussion about future programs for the meetings followed. The tentative program schedule is: PACKET for Nov., Christmas Party for Dec., Homebrew night will be in January. Myron filled the board in on the proposal for the Christmas Party. It was agreed to hold the party at the NCO Club at Pete Field on the regularly scheduled meeting night of Dec. 11th. It was further voted on and approved that the club award a HT for the grand raffle prize. The meals will cost \$10.50 for a fish dinner or \$13.00 for a prime rib dinner, the cost of which will include the raffle ticket. Tickets for the party will be on sale at the Nov. meeting. You will not have to be present to win the grand prize. Deadline for those wishing to attend will be one week prior to the party or Dec. 4th. There being no further business, the meeting was adjourned at 9:00PM.

Submitted by Al, N0CMW

"THE VIEW FROM THE PEAK"
by George Hinds, N8CIX/Ø

Summer has slipped away here in the Rockies, and now autumn is upon us. The last weeks of September saw the aspen leaves taking on their golden yellow hues as they signal the change of seasons in the "High Country."

Thelma and I had some LEARA folks as visitors then; that gave us a good excuse to put aside household chores and take them up into the mountains to see the changing colors; as the "chauffeur" for the trip, it also gave me another chance to see nature at her best.

Muriel Hornaday, WD8CQI, and Barbara Weyand, wife of Jack, N8CXV, were our guests at the time. We visited such places as the old mining town of Cripple Creek, and the world-famous ski town of Aspen (and the nearby "Maroon Bells" of picture-postcard fame: it is the most photographed scene in Colorado.) Muriel has some beautiful color snapshots of the Maroon Peaks and the lake at the base. Also observed on the trip to Aspen was a rare sight indeed: an "18-wheeler" crawling over the narrow road that tops Independence Pass in excess of 12,000' and, at this time, it was snow and ice-covered, too! Signs prohibit vehicles exceeding 35' in length because of the sharp curves, narrow road and sheer drop-offs, but apparently this driver was unable to read. A snow plow was preceding the truck down the mountain; the speed of both was about a slow walk and the truck driver appeared to be in shock! You can see some petrified drivers on these mountain pass roads....

WE BEGIN A NEW ADVENTURE

After some deliberation, Thelma and I have decided to become mountain folks and set up permanent camp here in the little town of Woodland Park - to the extent of negotiating for a new home. If all goes well between us and the savings and loan outfit, by the time you read this we'll be in residence at 1320 Northwoods Drive. Our mail address from here on out is P. O. Box 5708, Woodland Park, CO 80863. If you're in the area, call us at 303-687-2610, or try the 146.97 or 145.16 repeaters.

HERE'S ONE FOR YOU "MARATHONERS"

On Sunday, September 9th, a marathon runner was caught in a blizzard going over Imogene Pass (13,114'). He perhaps owes his life to a swift-footed burro named Clyde and Clyde's owner.

The blizzard stopped all 187 contestants. One runner was suffering more than the others; he had severe hypothermia when he was found, stumbling and incoherent in blinding snow with a -20 degree wind chill. The burro's owner came upon the runner; he then tied him to the burro and so Clyde helped haul him up an incline to where a sheriff's car was available to take the runner in for medical assistance. Fate was on this runner's side: Clyde was one of two burros entered in this year's race over Imogene Pass, the first time in 12 years that a burro was allowed to enter.

PIKES PEAK OR BUST - AGAIN AND AGAIN!

Since moving here in February, four trips have been made to the top of the Peak at 14,110' by yours truly: two on the Manitou and Pikes Peak Cog Railway, and two by the automobile highway (which is longer - and dustier - than by rail. It's not often that one gets to try out an antenna almost 3 miles high. You can be assured that even one-watt walkie-talkies reach out to 100 mile distant repeaters from that altitude. On a couple of trips, I also had a scanner monitor along. One can hear police, railroad, etc., communications so far away that it is not unusual to hear multiple calls, from opposite directions, on a single channel with each being 200 miles from the other - the heterodynes are fierce.

"ENGINE 97, WHERE ARE YOU?"

That plaintive call from a railroad dispatcher to a distant train may soon be a thing of the past, if experiments by Burlington Northern and Union Pacific are as successful as anticipated. The age of determining a train's location by signals via satellite is upon us; Motorola has developed such a system.

C U all next month - 73, George

GENERAL MEETING MINUTES FOR OCTOBER 85
The general meeting was called to order by Pres. Mike Stansberry, KØTER, at 7:30 PM on October 8, 1985. 54 People were present at the meeting. Erin Davis was introduced by Mike. Erin thanked those who took part in the Enduro communications and then presented the club with a check for \$300 ! as a donation as an expression of their appreciation. Minutes for the September meeting were approved as printed in the Zero Beat. The treasurer's report showed \$147.84 as income and \$206.38 as expenses (did not include the \$300 check) with a balance of \$1656.72. The report was approved as presented.

Committee Reports:

RFI Committee: Ron, NKØP, Nothing to report.

Field Days: Tom, ADØØ, accepted the chairmanship for Field Day Committee.

SWAPFEST: Ron, NKØP, has a tentative agreement with the Rustic Hills Mall for use on May 18, 1986 for the swapfest.

Public Service: Mike, KØTER, assumed the position of Public Service Chairman and will attempt to publish a monthly article in the Zero Beat.

Education: Mark, NØEPF, has resigned and Frank, KL7IPV, has assumed that post and is also conducting upgrade classes. Joe, NØENM, gave a report on the novice classes being held at North Jr. High. It started off slowly but there are now seven students in attendance. Frank said that the upgrade classes will be held on Monday evenings, at his house, except on those nights that the PPRAA board meets.

CCARC: Oak, KØROL, no word now. Oak is wondering what is happening with it.

ANNOUNCEMENTS: WAYNE, WØBGV, has an Icom that needs repair and is willing to pay someone who can do it. Mark, NØEPF, reports that our PPRAA membership in ARRL has been renewed. Tom, ADØØ, has an interest in homebrew projects and would like anyone else interested to contact him.

OLD BUSINESS: Deaf & Blind School has been given a donation of a full set of Collins radio gear and would like to have amateur radio classes given for the residents of the school. Jim, WB9ABB, has volunteered to give those classes and requests that anyone interested in helping, contact him. The Collins gear has been appraised at \$1100 and may be sold in order to purchase solid state with a large digital readout to help the visually impaired at the school.

NEW BUSINESS: Myron, AH6AP, assessed the interest for a Christmas party to cost about \$13 per person. More details and discussion at the board meeting. Break, and then the Door ~~XXX~~ Prize Drawing and then elections.

Running for Pres: Frank, KL7IPV & Les, KØØNC - Les is the new President

Running for V. Pres: Oak, KØROL & Don, WØØHWS - Don is the new V.P.

By Acclamation Al, NØCMW, is the new Secretary.

Running for Treasurer: Bud, NØDDF & Jody KØØRØZ - Bud is the new Treasurer.

Running for boards: Frank, KL7IPV & Ron, NKØP & Jody, KØØRØZ. Frank is the new board member.

Meeting was adjourned at 9:20 PM. Mike, KØTER showed videos of the news media coverage of the hass involved in the Mexico City earthquake health and welfare traffic.

submitted by Mark, NØEPF.

•American "Woodpecker" coming?

The United States is due to change their OEW-line surveillance radars to state-of-the-art OTH (over the horizon) systems next year. OTH systems have a 5,800 mile range and operate in the HF bands between 5 and 28 MHz. Radar signals reflect back from the ionosphere thousands of miles away giving OTH radar ten times the range of present day systems. Propagation is assessed by computers which shift the radar's frequency to the most favorable spot within its six hf bands. The USSR has been using OTH radar for some time as any DX operator can attest to.



"Got any 25-amp fuses?"

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100 CLR:PRINT"J"
110 REM"THIS IS A COIL DESIGN PROGRAM BY"
120 REM"HARRY L. ROSIER - K4LBF"
130 REM"FINAL DESIGN NOVEMBER 5, 1980."
140 REM"SPECIAL THANKS TO THE RADIO"
150 REM"AMATEUR'S HANDBOOK FOR THE"
160 REM"EQUATION AND WIRE TABLES"
170 PRINTTAB(12)"COIL DESIGN":PRINT:PRINT
180 PRINT"THIS PROGRAM IS SELF EXPLANATORY BUT "
190 PRINT"WOULD YOU LIKE A BRIEF DESCRIPTION?"
200 PRINT"PLEASE ANSWER (Y OR N)":INPUT D$
210 PRINT
220 IF D$="Y" THEN GOSUB1690
230 PRINT:PRINT
240 IF D$="N" THEN GOTO 280
250 PRINT"      WTO CONTINUE, PRESS ANY KEY":FORI=1TO8:PRINT:NEXTI
260 GET A$:IF A$=""GOTO260
270 FOR I = 1 TO 100: NEXT I
280 PRINTTAB(15)"NOTES":PRINT:PRINT
290 PRINT"1. DESIGN OF THE COIL MUST MEET"
300 PRINT"   THE FOLLOWING CRITERIA:"
310 PRINT
320 PRINT"       75 MICROHENRIES MAX. INDUCTANCE"
330 PRINT"       .2 MICROHENRIES MIN. INDUCTANCE"
340 PRINT"       8 GAGE MAX. WIRE SIZE"
350 PRINT"       40 GAGE MIN. WIRE SIZE"
360 PRINT"       (FOR 1/4 INCH TUBING - USE SIZE 0)"
370 PRINT
380 PRINT"2. RESISTORS CAN BE USED AS COIL FORMS,"
390 PRINT"   AND MUST BE COMPOSITION TYPE HAVING"
400 PRINT"   THE FOLLOWING DIMENSIONS"
410 PRINT
420 PRINT"       1. 1/2 WATT - .14 X .38 INCHES"
430 PRINT"       2. 1    WATT - .22 X .50 INCHES"
440 PRINT"       3. 2    WATT - .30 X .70 INCHES"
450 PRINT"       (THESE ARE STANDARD RESISTOR SIZES)"
460 PRINT"3. OR,SELECT YOUR OWN DIAMETER FORM"
470 PRINT:PRINT"      WTO CONTINUE PRESS ANY KEY"
480 GET A$: IF A$="" THEN480
490 FORI=1TO20:PRINT:NEXTI
500 PRINT"DO YOU WISH TO BEGIN WITH":PRINT
510 PRINT"1-INDUCTANCE IN MICROHENRIES, OR"
520 PRINT"2-INDUCTIVE REACTANCE"
530 PRINT
540 INPUT S:PRINT
550 IF S=1 THEN 660:IF S=2 THEN 570
560 IF S<1ORS>2THENPRINT"ANSWER 1 OR 2 PLEASE":GOTO540
570 PRINT"WHAT IS THE DESIRED INDUCTIVE REACTANCE IN OHMS":INPUTXL:PRINT
580 INPUT"WHAT FREQUENCY IN MEGAHERTZ":F:PRINT
590 L=XL/(2*3.14159*F)
600 L$=STR$(L)
610 PRINT"REQUIRED INDUCTANCE=")LEFT$(L$,5)
620 PRINT"MICROHENRIES"
630 IF L<.2 OR L>75 GOTO570
640 GOTO690
650 FOR X=1TO16:PRINT"":NEXT
660 PRINT"WHAT IS THE DESIRED COIL INDUCTANCE IN MICROHENRIES":INPUTL:PRINT
670 IF L>75 THEN PRINT"75 MICRO-H MAX. PLEASE REENTER":GOTO660
680 IF L<.2 THEN PRINT"0.2 MICROHENRIES MIN.- PLEASE REENTER":GOTO660
690 PRINT"SELECT COIL FORM"
700 PRINT"   1-1/2 W RESISTOR"

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710 PRINT" 2-1 W.RESISTOR"
720 PRINT" 3-2 W.RESISTOR"
730 PRINT" 4- OTHER FORM"
740 PRINT
750 INPUT A
760 IF A<1 OR A>4 THEN 750
770 IF A =1 THEN D=.140
780 IF A =2 THEN D=.220
790 IF A =3 THEN D=.300
800 IF A =4 THEN 820
810 IF A =<3 THEN 850
820 PRINT"WHAT IS THE DIAMETER OF THE"
830 PRINT"COIL IN INCHES?"
840 PRINT : INPUT D
850 PRINT "WHAT GAGE ENAMELED WIRE IS TO BE USED " : INPUT G
860 IF G=0 THEN W=.250
870 IF G=8 THEN W=.131
880 IF G=9 THEN W=.116
890 IF G=10 THEN W=.104
900 IF G=11 THEN W=.093
910 IF G=12 THEN W=.083
920 IF G=13 THEN W=.074
930 IF G=14 THEN W=.067
940 IF G=15 THEN W=.060
950 IF G=16 THEN W=.053
960 IF G=17 THEN W=.047
970 IF G=18 THEN W=.042
980 IF G=19 THEN W=.038
990 IF G=20 THEN W=.034
1000 IF G=21 THEN W=.030
1010 IF G=22 THEN W=.027
1020 IF G=23 THEN W=.024
1030 IF G=24 THEN W=.0216
1040 IF G=25 THEN W=.0193
1050 IF G=26 THEN W=.0172
1060 IF G=27 THEN W=.0154
1070 IF G=28 THEN W=.0138
1080 IF G=29 THEN W=.0122
1090 IF G=30 THEN W=.011
1100 IF G=31 THEN W=.0099
1110 IF G=32 THEN W=.00885
1120 IF G=33 THEN W=.0079
1130 IF G=34 THEN W=.0070
1140 IF G=35 THEN W=.0063
1150 IF G=36 THEN W=.0057
1160 IF G=37 THEN W=.0050
1170 IF G=38 THEN W=.0045
1180 IF G=39 THEN W=.0040
1190 IF G=40 THEN W=.0035
1200 IF G>40 THEN 850
1210 N=((40*L*W)+SQR ((1600*W2*L2) +(72*D2*L))) / (2*D2)
1220 N1=((40*L*W)-SQR ((1600*W2*L2) +(72*D2*L))) / (2*D2)
1230 IF N>N1 THEN N2=N
1240 IF N<N1 THEN N2=N1
1250 N2=(INT(N2*10))/10
1260 FOR X=1 TO 15:PRINT:NEXT
1270 PRINT"WIRE SIZE=";G;" GAGE"
1280 PRINT"COIL DIA.=";D;" INCHES"

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REMAINDER OF PROGRAM WILL APPEAR NEXT MONTH. THANKS TO LARRY YACOBELLI FOR PROVIDING THIS LISTING. Ed.

PUBLIC SERVICE COMMUNICATIONS

Amateur radio exists as a hobby because it qualifies as a PUBLIC SERVICE. This is the first of what I hope could be a regular monthly column about public service communications in the Pikes Peak region.

I hope to use this column to announce public service events, give public recognition to those who participate in public service communications, and maybe even editorialize a bit.

This month I am going to give credit to those who helped with two different events: one planned and one unplanned. Those events were the Pike's Peak Enduro motorcycle event and the Mexico City earthquake.

I am mentioning those who directly helped me with the Mexico City communications, although I realize many others were involved here; and throughout the country. Thanks to: Frank Drake, KL7IPV; Jim Sorrels, WA9ABB; Al Vrooman, N6CHW; Dave Vierling, NBDV; Dave Allen, WB8TAQ; Bob Hand, WA8LAK; Carlos Sanchez, WB8LNN; Mory Wunderlich, WA8YNP; Vern Lathrup, WB8MWH; and my wife, Luci. A special thanks to Mory, WA8YNP for sending and receiving answers to sixteen of the messages I held at a time when I was getting desperate about getting any of the messages through.

I will talk more about the Mexico City communications at a later time, as I have some ideas about making things work more efficiently if we are ever called upon to help in any disaster.

The Pike's Peak Enduro was held on Sunday, Oct. 6 north of Florissant, Co. It was a beautiful day to be in the mountains. Many thanks to those who helped make this event a success:

Al, N6CHW and Jack, N6CY9 who worked net control the entire day. To the following who worked check points:

Bud, N8DDF; Lee, KC8NC; Malcolm, KE9S; Rosie, WA8MNL; Bryan, NE8V; Ray, AABL; Larry, KA8PAD; Jerry, N8FZN; Monty, WB8YDD; Doc, W8MCT; and Karl, WB8YED; who managed to keep up (on foot) with the organizer and honcho of the event. Great work and I hope you enjoyed it enough to help again.

That is it for this month. If anyone has comments, or any subjects you would like to read about; let me know and I'll do what I can to cover them here.

73...Mike, K8TER

The next regularly scheduled meeting of the Pikes Peak Amateur Radio Association will be held on November 13th, at 7:30PM at Giuseppe's Depot located at #10 S. Sierra St. (Behind the Antlers Hotel).

RADIO GROUP SCHEDULES VE TESTING

VE testing, for the purpose of obtaining or upgrading an amateur radio station/operator license, will be held Nov. 23, at the First United Methodist Church, 428 N. Nevada Ave.

The testing, sponsored by the Pikes Peak Radio Amateur Association, begins at 9 am. To pre-register, mail a completed current FCC form 610, a photocopy of current license, and a \$4 check or money order payable to ARRL/VEC to Peter LaFosse, N8LA, 5758 N. Meridian Rd., Peyton, Colo. 80831. The materials must be received by Nov. 15th.

Walk-ins must bring a photocopy of current license and a \$4 check or money order.

All licensed amateurs should bring their current license with them. All applicants will be required to provide photo proof of identification.

Handicapped applicants should notify Peter LaFosse in advance so appropriate procedures can be coordinated. For information, Call LaFosse at 495-4829, or Ron Deutsch at 593-8352.

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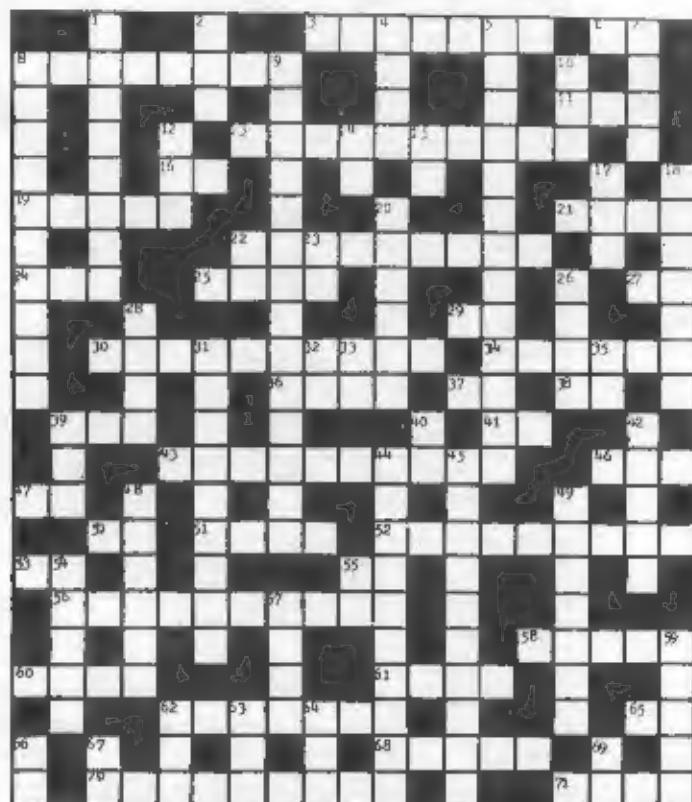
ARRL VE TEST SCHEDULE

Date	Location & Sponser	Contact
October 12,85	Northern Colo ARC Lincoln Ctr, Ft. Collins	KDØRY
October 26,85	Mile Hi Ve Team Lakewood, Colorado	WØIJR
October 26,85	Pueblo ARC Pueblo, Colorado	WBØYES
November 21,85	ARA Ham Radio School Aurora, Colorado	KQØJ
November 23,85	Pikes Peak ARC Colorado Springs, Co	NØLA
November 30,85	Mile Hi Ve Team Lakewood, Colorado	WØIJR
December 14,85	Pueblo ARC Pueblo, Colorado	WBØYES
Sept-Nov 21,85 Semester break Jan 2- May 1,86	ARA Ham Radio School 16th & Kingston, Aurora Novice thur Extra Classes 7:30 pm. Novice Testing each week.	WA7WDJ Principal

To schedule for a VE Test, please send a completed 610 form w/copy of your license and a check made payable to "Arrl-VEC" in the amount of \$4.00, to the Contact person. Walkins are accepted at the discretion of each VE team according to the paperwork and the size of their facility. To guarantee a reserved seating at a test session, all paperwork should be sent to the Contact person 30 days in advance of the test.

Crossword Puzzle

John Lawson, WA6ZXN



DOWN

1. The entire range of wavelengths in radio waves.
2. The same as Greenwich mean time.
4. Who's law states voltage(E) = current(I) multiplied by resistance(R).
5. QRM and QRN.
7. Transmitter.
8. Talking for hours.
9. r.m.s.
10. Number of years a log must be kept.
12. A million cycles per second. (abbr.)
14. Integrated circuit.
15. Power amplifier.
17. Award for confirming all states in the U.S.
18. WX
20. ditdahditdahditdah.
22. "This is" in Morse code.
23. Cuba prefix.
26. Receiver.
28. Common transmission line.

31. 1000 kilohertz.
32. Egypt prefix.
33. State in W4-land. (abbr.)
35. Intermediate frequency.
39. Excellent daytime DX band during the years of high sunspot activity.
40. Clipperton Island prefix.
42. The ITU phonetic word for "1."
44. A solid-state tube.
45. Voltage(E) divided by current(I).
48. Unit of current.
49. An electrode of a tube.
54. The approximate metric equivalent to the yard.
55. Austria prefix.
57. Units of resistance.
59. Transceiver in laymen's terms.
62. Distress call in Morse code.
63. Nothing.
64. Push to talk.
66. Type of current found in house lines.
67. The telegraphic laugh.
69. Type of current from a battery.

ACROSS

3. State in W4-land.
6. Radio stations in other countries or at great distances.
8. Station receiving a signal on one frequency and automatically retransmitting it on another.
11. A group of hams meeting on a specific frequency, at a scheduled time, for direct communications.
13. Used to propagate high frequency radio signals over great distances.
16. Hertz (abbr.)
19. One cycle per second.
21. Usually sent to guarantee a reply by mail.
22. Happens to resonant frequency as antenna length increases.
24. Five required for Novice; 18 for General; 20 for Extra.
25. Excellent directional antenna.
27. W1-state with the least number of amateurs. (abbr.)
29. From
30. Federal Communications _____
34. Beginner's ticket.
36. Type of beam antenna.
37. One of North Carolina's neighbors. (abbr.)
38. Radio frequency.
39. Thanks.
41. And.
43. Electrolytics are common types.
46. Antenna. (abbr.)
47. Good night in Morse code.
50. Old man in Morse code.
51. Not odd.
52. Country with "VK" prefix.
53. Good morning in Morse code.
56. Belgium prefix.
58. Tube's internal components
58. Current (I) multiplied by voltage (E).
60. Not there.
61. A heavenly object in radio astronomy.
62. The maximum usable frequency has a direct relation to this cycle.
65. Field day. (abbr.)
68. A Space Age VHF repeater.
70. A poor electrical conductor.
71. The ITU phonetic word for "L."

ANSWERS NEXT MONTH - GOOD LUCK!!!

MILEY'S RADIO

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